

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

What is claimed is

1. An apparatus for coding an information signal, the apparatus comprising:

5 means for processing the information signal in order to obtain data packets, each data packet being of a data packet type of a predetermined set of data packet types, at least one of the data packet types being a removable data packet type; and

10 15 means for arranging the data packets into a data stream so that the data stream comprises consecutive access units of consecutive data packets, so that the data packets within each access unit are arranged in accordance with a predetermined order among the data packet types,

20 25 wherein the means for processing and the means for arranging are adapted so that even when a data packet of the removable data packet type is removed from the data stream, borders between successive access units are detectable from the data stream by use of the predetermined order.

30 35 2. The apparatus of claim 1, wherein the means for processing and the means for arranging are adapted further so that even when a data packet of the removable data packet type is removed from the data stream, the data stream is still consistent with predetermined parsing rules for parsing the data stream.

3. The apparatus in accordance with claim 1, wherein each data packet comprises a type number being indicative of which data packet type same data packet is.

4. The apparatus of claim 1, wherein the data packet of the removable data packet type further comprises payload data.
5. The apparatus of claim 1, wherein all data packet types whose data packets are not absolutely necessary for retrieval of the information signal are removable data packet types.
- 10 6. The apparatus of claim 1, wherein at least one removable data packet type is a negligible data packet type, with data packets of that type not being necessary for retrieval of the information signal from the data stream.
- 15 7. The apparatus of claim 1, wherein the at least one removable data packet type is an essential data packet type, with data packets of that type being necessary for retrieval of the information signal from the data stream, and being associated with a reference number, wherein at least one data packet of the other data packets comprises the reference number.
- 20 8. The apparatus of claim 1, wherein the predetermined set of data packet types further comprises at least one non-removable data packet type.
- 25 9. The apparatus of claim 8, wherein the predetermined order at least defines as to whether data packets of the removable data packet type has to precede or have to follow data packets of the non-removable data packet type within an access unit.
- 30 10. The apparatus of claim 1, wherein the means for processing and the means for arranging are adapted so that each access unit comprises at least one non-removable data packet.

11. The apparatus of claim 1, wherein each access unit is assigned to a different time portion of the information signal.

5 12. An apparatus for converting a data stream representing a coded version of an information signal from a first performance level to a second performance level, the data stream comprising consecutive access units of consecutive data packets, each data packet being of a data packet type of a predetermined set of data packet types, at least one of the data packet types being a removable data packet type, and the data packets within each access unit being arranged in accordance with a predetermined order among the data packet types such that even when a data packet of the removable data packet type is removed from the data stream, borders between successive access units are detectable from the data stream by use of the predetermined order, the apparatus comprising

20 means for removing at least one data block of the removable data packet type from the bit stream without manipulating the remainder of the data stream.

25 13. The apparatus of claim 12, wherein the means for removing is adapted to remove each data packet of a chosen one of the at least one removable data packet.

30 14. The apparatus of claim 12, wherein each data packet comprises a type number indicating of which data packet type same data packet is, and the apparatus further comprising

35 an input for receiving the data stream, data packet by data packet; and

means for investigating the type number of a current data packet in order to obtain the data packet type of the current data packet.

5 15. The apparatus of claim 12, wherein the at least one removable data packet type is an essential data packet type, with data packets of that type being necessary for retrieval of the information signal from the data stream, and being associated with a reference number, wherein at least one data packet of the other data packets comprises the reference number, and wherein the apparatus further comprises a means for inserting the data packet of the at least one removable data packet type at another position within the data stream in an access unit preceding an access unit comprising the data packet comprising the reference number with which the data packet of the removable data packet type is associated.

20 16. The apparatus of claim 12, wherein the at least one removable data packet type is an essential data packet type, with data packets of that type being necessary for retrieval of the information signal from the data stream, and being associated with a reference number, wherein at least one data packet of the other data packets comprises the reference number, and wherein the apparatus further comprises

30 means for transmitting the data stream having the at least one data packet removed via a first transmission link to a receiver, and

35 means for transmitting the at least one data packet via a second transmission link to the receiver, the first transmission link being different from the second transmission link.

17. The apparatus of claim 12, wherein the first performance level is higher than the second performance level and the means for removing is adapted to discard the at least one data packet.

5

18. An apparatus for decoding a data stream representing a coded version of an information signal, the data stream comprising consecutive access units of consecutive data packets, each data packet being of a data packet type of a predetermined set of data packet types, at least one of the data packet types being a removable data packet type, and the data packet within each access unit being arranged in accordance with a predetermined order among the data packet types, such that even when a data packet of the removable data packet type is removed from the data stream, borders between successive access units are detectable from the data stream by use of the predetermined order, the apparatus comprising

10

means for detecting a border between successive access units by use of the predetermined order; and

means for decoding the successive access units.

15

19. The apparatus of claim 19, wherein the predetermined set of data packet types further comprises at least one non-removable data packet type, and the predetermined order at least defines as to whether the data packets of the removable data packet type have to precede or follow data packets of the non-removable data packet type, and wherein the means for detecting comprises

20

means for detecting the beginning of a new access unit if, either,

5 1) a preceding data packet is of a non-removable data packet type and a current data packet is of the removable data packet type, and, in accordance with the predetermined order, data packets of the removable data packet type have to precede data packets of the non-removable data packet type; or

10 2) a preceding data packet is of the removable data packet type and the current data packet is of a non-removable data packet type, and, in accordance with the predetermined order, data packets of the removable data packet type have to succeed data packets of the non-removable data packet type.

15 20. The apparatus of claim 19, wherein the predetermined set of data packet types comprises at least a first removable data packet type for which the predetermined order defines that data packets of that type have to precede data packets of the non-removable data packet type, and at least a second removable data packet type for which the predetermined order defines that data packets of that type have to succeed data packets of the non-removable data packet type, and wherein the means for detecting the beginning of a new access unit is adapted to detect the beginning of a new access unit further if the proceeding data packet is of the second removable data packet type and the current data packet is of the first removable data packet type.

25 30 21. The apparatus of claim 18, wherein each data packet comprises a type number indicating of which data packet type same data packet is, and the apparatus further comprising

35 an input for receiving the data stream, data packet by data packet; and

means for investigating the type number of a current data packet in order to obtain the data packet type of the current data packet.

- 5 22. The apparatus of claim 18, wherein the information signal is a video signal, an audio signal or a multi-media signal.
- 10 23. The apparatus of claim 18, wherein each access unit belongs to a picture from a video.
24. The apparatus of claim 18, the apparatus further comprising
15 an input for receiving the data stream; and
a buffer for buffering the received data packets in the order of their arrival and discarding buffer data packets access unit-wise.
- 20 25. A data stream representing a coded version of a video or audio signal, the data stream comprising consecutive access units of consecutive data packets, each data packet being of a data packet type of a predetermined set of data packet types, at least one of the data packet types being a removable data packet type, and the data packets within each access unit being arranged in accordance with a predetermined order among the data packet types such that even when a data packet of the removable data packet type is removed from the data stream, borders between successive access units or detectable from the data stream by use of the predetermined order.
- 25 30 35 26. A method for coding an information signal, the method comprising the following steps:

5 processing the information signal in order to obtain data packets, each data packet being of a data packet type of a predetermined set of data packet types, at least one of the data packet types being a removable data packet type; and

10 10 arranging the data packets into a data stream so that the data stream comprises consecutive access units of consecutive data packets, so that the data packets within each access unit are arranged in accordance with a predetermined order among the data packet types,

15 15 wherein the steps of processing and arranging are adapted so that even when a data packet of the removable data packet type is removed from the data stream, borders between successive access units are detectable from the data stream by use of the predetermined order.

20 27. A method for converting a data stream representing a coded version of an information signal from a first performance level to a second performance level, the data stream comprising consecutive access units of consecutive data packets, each data packet being of a data packet type of a predetermined set of data packet types, at least one of the data packet types being a removable data packet type, and the data packets within each access unit being arranged in accordance to a predetermined order among the data packet types such that even when a data packet of the removable data packet type is removed from the data stream, borders between successive access units are detectable from the data stream by use of the predetermined order, the method comprising the following step:

25

30

35

removing at least one data block of the removable data packet type from the bit stream without manipulating the remainder of the data stream.

5 28. A method for decoding a data stream representing a coded version of an information signal, the data stream comprising consecutive access units of consecutive data packets, each data packet being of a data packet type of a predetermined set of data packet types, at least one of the data packet types being a removable data packet type, and the data packet within each access unit being arranged in accordance with a predetermined order among the data packet types, such that even when a data packet of the removable data packet type is removed from the data stream, borders between successive access units are detectable from the data stream by use of the predetermined order, the method comprising the following steps:

20 detecting a border between successive access units by use of the predetermined order; and
decoding the successive access units.

25 29. Computer program having instructions for performing, when running on a computer, a method for coding an information signal, the method comprising the following steps:

30 processing the information signal in order to obtain data packets, each data packet being of a data packet type of a predetermined set of data packet types, at least one of the data packet types being a removable data packet type; and

35 arranging the data packets into a data stream so that the data stream comprises consecutive access units of consecutive data packets, so that the data packets

within each access unit are arranged in accordance with a predetermined order among the data packet types,

5 wherein the steps of processing and arranging are adapted so that even when a data packet of the removable data packet type is removed from the data stream, borders between successive access units are detectable from the data stream by use of the predetermined order.

10

15 30. Computer program having instructions for performing, when running on a computer, a method for converting a data stream representing a coded version of an information signal from a first performance level to a second performance level, the data stream comprising consecutive access units of consecutive data packets, each data packet being of a data packet type of a predetermined set of data packet types, at least one of the data packet types being a removable data packet type, and the data packets within each access unit being arranged in accordance to a predetermined order among the data packet types such that even when a data packet of the removable data packet type is removed from the data stream, borders between successive access units are detectable from the data stream by use of the predetermined order, the method comprising the following step:

20

25

30 removing at least one data block of the removable data packet type from the bit stream without manipulating the remainder of the data stream.

35 31. Computer program having instructions for performing, when running on a computer, a method for decoding a data stream representing a coded version of an information signal, the data stream comprising consecutive access units of consecutive data packets, each data

5 packet being of a data packet type of a predetermined set of data packet types, at least one of the data packet types being a removable data packet type, and the data packet within each access unit being arranged in accordance with a predetermined order among the data packet types, such that even when a data packet of the removable data packet type is removed from the data stream, borders between successive access units are detectable from the data stream by use of the predetermined order, the method comprising the following 10 steps:

detecting a border between successive access units by use of the predetermined order; and

15 decoding the successive access units.